

# Operational Flexibility and Organizational Resilience of Small and Medium Enterprises in Rivers State

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**Abstract:** *This study seeks to ascertain the empirical relationship between operational flexibility and organizational resilience of SMEs in Rivers State. Quantitative data was collected via a questionnaire, and all submitted hypotheses were verified after an empirical analysis utilizing the cross-sectional multiple regression framework. One thousand and sixteen (1016) small and medium-sized businesses are registered in Port Harcourt, according to Nigerian Directory (2020). Our accessible population consists of managers, directors, account managers, and other personnel from the 1,016 small and medium-sized businesses that are registered. Using the Taro Yamen formula, the sample size for this investigation was established: The number of subjects in this study that make up the sample is 287. Both probability and non-probability sampling techniques were used in this investigation. The internal reliability was ascertained using the Cronbach Alpha method. This approach adhered to the Likert measurement scale, which has a 0.7 threshold value for each item. Thus, an instrument is considered reliable if its reliability coefficient is 0.7 or higher. In conclusion, operational flexibility in the areas of new product flexibility and volume flexibility is necessary for organizational resilience of SMEs in Rivers State, Nigeria to adapt. In light of the study's results and conclusions, the study recommends that it is imperative for entrepreneurs who run small and medium-sized enterprises (SMEs) to make sure that their product and services employ flexible methodologies for both new product creation and modification in order to meet project goals and be able to adjust to changing market conditions.*

**Keywords:** *New Product Flexibility, Volume Flexibility, Adaptability, Agility*

## Introduction

Businesses around the world, small and medium-sized organizations (SMEs) in particular, face difficulties due to an uncertain and fluctuating business atmosphere. They frequently experience an unparalleled quantity of disruptions to their current state. According to Wieland and Wallenburg (2013), these businesses fail as a result of inadequate risk management techniques and scalable resilience metrics. Without a doubt, SMEs are crucial to the expansion and advancement of any country. Despite this, the environment in which this industry operates is extremely unstable, unpredictable, complicated, and vague endangering its continued existence and prosperity. The local and global communities are aware of these dangers. According to the latest information, of the 30 companies that were among the Fortune 500 when they were first listed in 1970, more than 19 have been removed from that esteemed list as of right now, primarily as a result of acquisitions or liquidations (Tengblad & Oudhuis, 2018). The situation is the same back in Nigeria because there has been very little encouragement for business.

Fascinatingly, Denyer (2017) made the case that organizational resilience is essential to a company's ability to expand and to ensure its survival. This is consistent with the widespread belief that an entrepreneur needs cultivate resilience in order to create a successful business (Ayala & Manzano, 2014). Numerous themes, including tourism,

work-life balance, terrorism, and so on, have been examined in connection with the organizational resilience paradigm (Lai, et.al. 2016; Ngoasong & Kimbu, 2016). According to contemporary research, organizational resilience is a sophisticated, interdisciplinary phenomenon with many facets. However, based on the specific research environment, different conceptions and classifications of resilience are used (Sawalha 2015; Linnenluecke 2017; Williams et al. 2017). To summarize, organizational resilience can be characterized as the capacity to foresee possible dangers, manage unforeseen circumstances skillfully, and draw lessons from them to create a flexible capability aimed at promoting organizational change. Various scholars contend that achieving this organizational capacity requires cooperation.

Fortunately, According to Johnson et al. (2003), operational flexibility is frequently understood as a short-term flexibility potential related to daily operations, or as the ability to maneuver through routines that are developed determined by an organization's objectives and current structures. Higher operational flexibility, according to Johnson et al. (2003), allows a company to make quick adjustments to minimize the time between planning and implementation, which improves the company's capacity for improvisation and short-term fluctuation response. Numerous writers contend that flexibility represents responsiveness and adaptability and is directly tied to environmental uncertainties (Lu et al., 2017; Sushil, 2017). According to recent research, employees' flexibility, resource mechanization, and technological aptitude are critical for understanding client requirements and adapting to unique situations (Gupta et al., 2018). The ability to respond to turbulence and disorders in the environment, which occurs in conjunction with the deployment of resources and auxiliary capabilities, is one of the fundamental premises of flexibility, as supported by a review of the literature. The concepts of flexibility and adaptability under uncertainty are closely related (Latan et al., 2018). Despite the numerous studies on operational flexibility, there still lacks studies relating it with organizational resilience. Hence, this study aims at filling the gap in literature between operational flexibility and organizational resilience of SMEs in Port Harcourt.

### **Statement of the Problem**

The flexibility and agility of entrepreneurs in Port Harcourt were found to be key obstacles to smooth operations. The fierce competition has made it challenging for new SMEs to adjust to their new workplace and line of work. Once more, SMEs and their entrepreneurs' capacity to swiftly analyze and comprehend the market they enter can be fatal to their businesses. Small and medium-sized enterprises (SMEs) are proliferating these days, and the market is growing more dynamic and competitive. To stay relevant in the market and business environment, small and medium-sized enterprises are becoming more dynamic and employing a variety of techniques. No SME can adopt just any operational flexibility; instead, each SME needs to identify the right operational flexibility that best fits its unique set of needs. In today's cutthroat market, a small and medium-sized enterprise (SME) cannot thrive without the necessary operational flexibility. Nigerian SMEs are under a great deal of strain as the country becomes more integrated into the global economy. The study therefore seeks to resolve the issues of organizational resilience among SMEs in Port Harcourt by adopting strong operational techniques.

### **Aim and Objectives of the Study**

This study seeks to ascertain the empirical relationship between operational flexibility and organizational resilience of SMEs in Rivers State. However, the specific objectives are;

- i. Investigate the relationship between new product flexibility and organizational resilience of SMEs in Rivers State
- ii. Ascertain the relationship between volume flexibility and organizational resilience of SMEs in Rivers State

### **Research Questions**

- i. What is the relationship between new product flexibility and organizational resilience of SMEs in Rivers State?
- ii. What the relationship between volume flexibility and organizational resilience of SMEs in Rivers State?

### **Research Hypotheses**

- H<sub>01</sub>:** There is no significant relationship between new product flexibility and adaptability of SMEs in Rivers State.
- H<sub>02</sub>:** There is no significant relationship between new product flexibility and agility of SMEs in Rivers State.
- H<sub>03</sub>:** There is no significant relationship between volume flexibility and adaptability of SMEs in Rivers State.
- H<sub>04</sub>:** There is no significant relationship between volume flexibility and agility of SMEs in Rivers State.

### **Review of Related Literature**

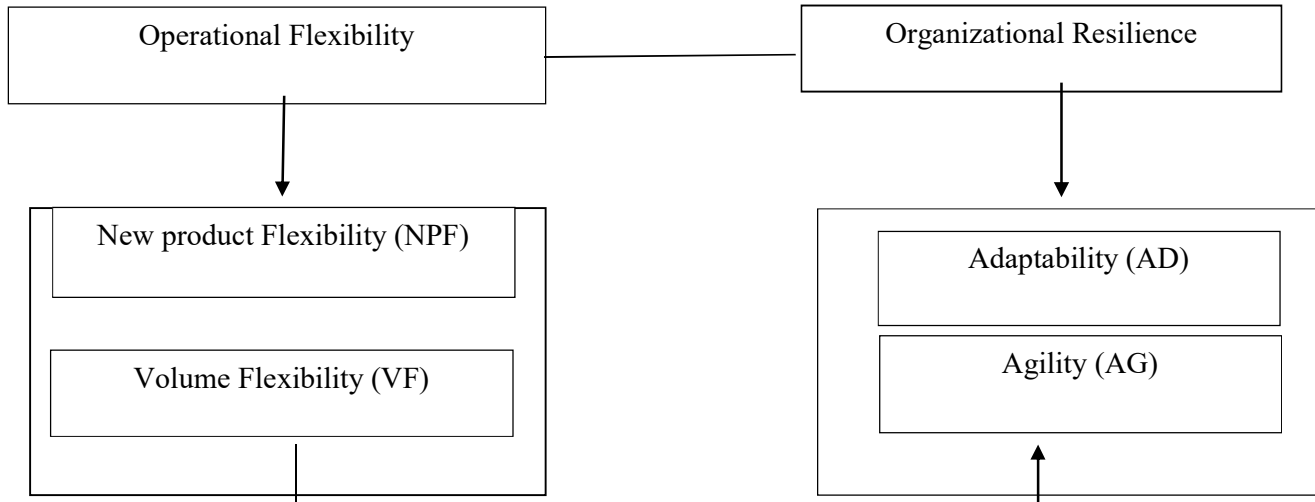
#### **Theoretical Foundation:**

Fiedler's (1964) contingency theory of leadership and organizational structure served as the foundation for this investigation. The first and largest study was this one. According to this idea, the psychological makeup of the group leader and a number of external factors, including the organization's size, technology usage, leadership style, and ability to adjust to shifting tactics, determine how well the group performs (Flinsch-Rodriguez, 2017). The concept is predicated on the fundamental tenet that no one kind of organizational structure is appropriate for every form of organization (Islam & Hu, 2012). Rather, current internal and external conditions determine the optimal course of action for organizational performance. Stated differently, according to this theory, organizational effectiveness is determined by how well two or more variables fit together (Donaldson, 2001). Functionalist theories of organizational structure are the focus of this theory (Woods, 2009). To summarize, the core components of this theory are reaction variables, which are organizational or managerial activities necessary to adjust to changing conditions, incidental variables, which are situational features, and performance variables, which are influencing factors.

We have concentrated on specific performance metrics that are probably a good fit between random variables and measurements of reaction variables to local circumstances. One of the essential problems when it comes to the success of a company is the perfect position of the leader in the context where it fits the most, for example in the case when the company is focused on increasing production where the work is technically a leader focused on achieving the goal will design any plan that can lead there without necessarily taking into account the relationships of employees or their wishes, on the other hand if a company is working to increase teamwork for a

project where you definitely need collaboration then a leader more focused on getting the consent of the workers then the leader with such a personality would fit better.

### Conceptual Framework



**Fig. 1.1 Operational Framework of Operational Flexibility and Organizational Resilience**

**Source:** adapted from: Emeana, & Onuoha, (2023); Onyokoko, & Needorn, (2021)

#### Concept of Operational Flexibility

Operational flexibility encompasses a firm's proficiency to adjust, either proactively or reactively, to unforeseen circumstances in its marketplace. It contains multiple characteristics that vary in significance depending on the context (Stevenson and Spring, 2007). Many management disciplines, including finance, automation, manufacturing, health care, and human resources, have utilized the term flexibility. Nevertheless, the definition of flexibility varies depending on the kind of product or service that is produced in each of these domains (Chanopas et al., 2006). In order to provide flexibility in services, Aranda (2003) states that newly developed services must be quickly included into the system of service delivery, modifications to the service mix and schedules of customers must be handled with care, capacity must be quickly adjusted, and services must be customized. Toni and Tonchia (2005) discovered that, when all operations, including design, purchasing, distribution, marketing, services, and so on, are taken into account, the concept of operational flexibility has a wider application than manufacturing flexibility. These days, most service organizations have to cope with flexibility as one of their core objectives due to evolving circumstances. Organizations that are flexible typically have more possibilities to vary their offerings, which enables them to meet a wider range of client and market demands.

Highly flexible organizations may swiftly create novel and distinctive goods while also increasing their output without compromising efficiency, cost, or performance (Martínez, et. al, 2016). This flexibility allows these organizations to keep up with the rapid advancement of technology worldwide. In order to implement this kind of

flexibility, resources must be ready for the challenge at hand, including employees with the highest level of coordination, minimal risks, and the cheapest rates (Fredericks, 2005). The ability of the various operating systems to adapt to changes both inside and outside is what essentially determines the service's improvement and sustainability, according to Alolayyan, Ali (2011). It also improves the formulation of different approaches and possible change experiences. Operational flexibility refers to a company's capacity to address both internal and external issues, resulting in the creation of possibilities for competition and the mitigation of losses (Alolayyan, et. al. 2012; Tiwari, et. al. 2015). In technical terms, operational flexibility pertains to three aspects of the service delivery system: input, processing, and output flexibility (Chahal, et. al, 2018). The firm can interact with prestigious suppliers and all kinds of clients thanks to the dimensions of input and output flexibility, which results in a value chain that boosts the efficiency of the organization (Sawhney, 2006).

**New product flexibility (NPF):** An organization can react to shifts in customer expectations by introducing new products into the market thanks to new product flexibility. The marketing plan combines operational strategy with the flexibility of new products. While operational plans focus on securing the facilities and resources required to produce goods and components that meet consumer expectations while extending product lifetime, marketing strategies are centered on customer satisfaction (Needorn and Onyokoko, 2021). Scherreret et al. (2014) stated that new product flexibility is also seen as an essential support for production. According to other authors, flexibility in product development is the ability to swiftly and efficiently produce and launch new products as well as modify existing ones (Zang et al., 2002). The strategic significance of the NPF is derived from its many roles and obligations. First, according to Chang, Lin, and Sheu (2002), there is an unbreakable link between the flexibility of the product mix and the flexibility of modifications. Second, the NPF helps businesses execute tailored efforts and delight customers. Lastly, NPF has a strong correlation with the performance of new items because it may result in cost savings (Larso, 2004). Lastly, companies that focus on innovation and variations must have this (Das, 2001).

**Volume Flexibility (VF):** According to Chod, Rudi, and Van Mieghem (2012), volume flexibility is the capacity to alter operational volumes. Flexibility comes in two flavors: upside flexibility or the capability to increase productivity exceed the limits, and downward flexibility, or a desire to decrease productivity below limit (Goyal & Netessine, 2011). Goyal and Netessine (2005) highlighted the value of volume flexibility, which enables businesses to adjust their output volume without sustaining significant expenses, in the face of erratic demand. To achieve a balance between capacity and demand, volume flexibility is specifically used. Volume flexibility is the ability of a production system to be financially viable at different overall output volumes.

### **Organizational Resilience**

According to Hollnagel (2010), resilience is the inherent ability of a system or organization to modify its activities before, during, or after changes and disturbances in order to support necessary operations under both expected and unexpected conditions. The ability of an organization to foresee significant events from developing trends, to continuously adjust to change, and to quickly recover from adversity is known as resilience. The corporate environment is rapidly become more volatile, unpredictable, and linked, and the effects of outside events are becoming increasingly significant. You run the danger of falling behind if your response is untimely or improper. Thus, the definition of organizational resilience as a capability was given as a company's capacity to efficiently take in disruptive surprises that could endanger the

company's existence, formulate situation-specific responses to them, and then carry out transformative actions to capitalize on them (Lengnick-Hall et al., 2011).

Organizational resilience, according to Annarelli and Nonino (2016), is the capacity of an organization to deal with shocks from the outside and the inside while maintaining a strategic awareness and coordinating operational management. Within this domain, organizational resilience is frequently regarded as a multifaceted organizational characteristic that permits a company to successfully assimilate, react to, and possibly even benefit from disruptive events (Lengnick-Hall and Beck, 2005). Linnenluecke and Griffiths (2010) also made the observation that an organization's capacity for learning, adapting, and self-organization was correlated with its organizational resilience. Organizational resilience was defined by Lengnick-Hall et al. (2011) as the capacity and assurance of an organization to respond forcefully and successfully to circumstances that were unexpected, unpredictable, and sufficiently disruptive to put an organization's long-term survival at risk.

**Adaptability:** Organizations must possess adaptability in order to successfully handle external shocks. Within the social sciences, adaptability is still a relatively new term with no consensus definition (Simmie & Martin, 2009). The ability of an organization to adapt becomes especially important as people and organizations react to change. Through producing human and social capital, encouraging innovation and productivity, and generating opportunities, individual actors and firms play critical roles in economic and social growth (Burriard & Bhamra, 2011).

**Agility:** It's possible of an organization to produce high-quality goods and services are enhanced by agility, which makes it essential for organizational competitiveness (Crocitto & Youssef, 2003). In today's fiercely competitive business world, agile businesses may set themselves apart from the competition and offer greater value to customers. Organizations can differentiate themselves and take the initiative to obtain a competitive advantage by demonstrating agility (Harraf, Wanasika, Tate, & Talbott, 2015). According to Ganguly, Nilchiani, and Farr (2009), an agile company can achieve a comprehensive competitive advantage in the global market by increasing its market share, successfully and efficiently handling unforeseen changes, and so on. Organizations seeking to compete in their industry must adhere to Open Access (OA) principles (Anca-loana, 2019). Agile organizations are able to create services or well-tailored solutions that customers adore and appreciate because they have the ability to comprehend the dynamics of their expectations. According to Balaji et al. (2014), a primary objective of an agile organization is to guarantee customer happiness. As to Rigby et al. (2016), an agile organization fosters teamwork, collaborative decision-making, mutual trust, and respect in addition to prioritizing customer happiness to enhance employee satisfaction.

### **Empirical Review**

Osita-Ejikeme, and Amah, (2022) studied strategic flexibility and corporate resilience of manufacturing firms in south-south, Nigeria. The data from the 231 respondents was collected using Google Forms and a standardized questionnaire. The form was completed by 224 respondents, and copies of the completed forms were used in the study. The study employed Structural Equation Modelling (SEM) in conjunction with Smart PLS 3.3.3 to investigate the correlation between the Corporate Resilience metrics and the Strategic Flexibility dimensions. The findings demonstrate that increasing business resilience was facilitated by all aspects of strategic flexibility. The study suggests, among other things, that CEOs in manufacturing firms intentionally position their organizations to identify and gather outside knowledge about their

industry, technology, and market trends early. This will make the business more resilient and enable it to respond swiftly to shocks in the environment.

Onyokoko, and Onuoha, (2021) investigates organizational flexibility and corporate resilience of manufacturing firms in south-south, Nigeria. A sample of 217 management employees from registered manufacturing enterprises in Port Harcourt, Rivers state, was included in the study. The Partial Least Square estimate approach is used in a cross-sectional survey. Adaptive competence and agility were the chosen measures of choice, and structural and human resource flexibility were the dimensions used to capture organizational flexibility. The study found that there is a strong and positive correlation between human resource flexibility and adaptive capabilities as well as between structural flexibility and both. According to the agility model, structural flexibility and agility have a positive and substantial link, while human resource flexibility and agility have a positive, weak, and significant association.

Onyokoko, and Needorn, (2021) checked the operational flexibility and adaptive capability of manufacturing firms in south-south, Nigeria. In the study, a sample of 217 respondents was subjected to partial least square structural equation modeling. While new product flexibility and volume flexibility are used to evaluate the adaptive capacity of manufacturing organizations, operational flexibility is evaluated through the lens of technology and market-focused adaptive skills. As the study shows, there is a significant positive relationship between market-focused adaptive capabilities and organizational flexibility. Furthermore, the study discovered a strong and adequate predictive significance in the relationship between organizational flexibility and adaptive competence. In one interpretation, manufacturing companies' capacity to dynamically shift their consumer orientation and technology in response to external demands can be used to predict, at least in part, how quickly and continuously they will evolve through time and how they will innovate as entrepreneurs in order to stay competitive.

Lawrence-Chuku, and Onuoha, (2022) studied organizational flexibility and corporate performance of food and beverage firms in Rivers State, Nigeria. In the study, a cross-sectional survey was used. The study encompassed 176 managers and supervisors from 15 specifically chosen food and beverage companies in the state of Rivers. 123 responders, however, made up the sample size that was selected from the population. In order to obtain pertinent data, copies of questionnaires were distributed to respondents, and the systematic sampling technique was used. The bivariate hypotheses were analyzed using Spearman's rank order correlation. The investigation revealed a strong positive correlation between the corporate performance metrics (goal achievement and cost efficiency) and the organizational flexibility dimensions (operational and strategic flexibility). Thus, it was determined that increasing organizational flexibility will contribute to the improvement of food and beverage companies' corporate performance in Rivers State.

### **Methodology**

Quantitative data was collected via a questionnaire, and all submitted hypotheses were verified after an empirical analysis utilizing the cross-sectional multiple regression framework. One thousand and sixteen (1016) small and medium-sized businesses are registered in Port Harcourt, according to Nigerian Directory (2020). Our accessible population consists of managers, directors, account managers, and other personnel from the 1,016 small and medium-sized businesses that are registered. Using the Taro Yamen formula, the sample size for this investigation was established: The number of subjects in this study that make up the sample is 287. Both probability and non-probability sampling techniques were used in this investigation.

The internal reliability was ascertained using the Cronbach Alpha method. This approach adhered to the Likert measurement scale, which has a 0.7 threshold value for each item. Thus, an instrument is considered reliable if its reliability coefficient is 0.7 or higher.

### Statistical Analyses using Spearman Ranking Correlation New Product Flexibility and Organizational Resilience

**H<sub>01</sub>:** There is no significant relationship between new product flexibility and organizational resilience of SMEs in Rivers State

			new product flexibility	adaptability	agility
Spearman's rho	new product flexibility	Correlation Coefficient	1.000	.921**	.874**
		Sig. (2-tailed)	.	.000	.000
		N	287	287	287
	adaptability	Correlation Coefficient	.921**	1.000	.883**
		Sig. (2-tailed)	.000	.	.000
		N	287	287	287
	agility	Correlation Coefficient	.874**	.883**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	287	287	287

#### Source: Field Survey Data, 2024, SPSS (Output)

The result shows that new product flexibility has a strong significant relationship and positively correlates with adaptability at a Rho = 0.874 and a Pv = 0.000 and new product flexibility further contributes strong and positive correlation towards agility at a Rho = 0.883 and a Pv = 0.000. The result presents new product flexibility as having a significant and positive impact on the two measures of organizational resilience of SMEs in Rivers State. Therefore, we reject null hypotheses one and two relating to new product flexibility and organizational resilience, because the Pv (0.000) < 0.05 level of significance.

### Volume Flexibility and Organizational Resilience

**H<sub>02</sub>:** There is no significant relationship between volume flexibility and organizational resilience of SMEs in Rivers State

			volume flexibility	adaptability	agility
Spearman's rho	volume flexibility	Correlation Coefficient	1.000	.872**	.886**
		Sig. (2-tailed)	.	.000	.000
		N	287	287	287
	adaptability	Correlation Coefficient	.872**	1.000	.896**
		Sig. (2-tailed)	.000	.	.000
		N	287	287	287
	agility	Correlation Coefficient	.886**	.896**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	287	287	287



**Source: Field Survey Data, 2024, SPSS (Output)**

The result shows that volume flexibility has a strong significant relationship and positively correlates with adaptability at a  $Rho = 0.872$  and a  $Pv = 0.000$  and agility further contributes strong and positive correlation towards organizational resilience at a  $Rho = 0.886$  and a  $Pv = 0.000$ . The result presents volume flexibility as having a significant and positive impact on the two measures of organizational resilience and as such contributing significantly toward SMEs in Rivers State. Therefore, we reject null hypotheses one and two relating to volume flexibility and adaptability and agility, because the  $Pv (0.000) < 0.05$  level of significance.

**Discussions of Findings**

From the results generated by all the hypotheses, it demonstrated that there exist a significant and positive connection between the variables under research since their correlations from the SPSS table were  $*0.921$ ,  $*0.874$ ,  $*0.872$ ,  $*0.886$ . From the outcome, it was obvious that all the elements of operational flexibility had good link with organizational resilience of SMEs in Rivers State. The first hypothesis suggested that new product flexibility has a positive linear noticeable association with organizational resilience based on the P-value less than 0.05 ( $P\text{-value} = 0.000 < 0.05$ ) which means that both variables have direct positive relationship which advances in the same positive direction. The second hypothesis showed that volume flexibility has a positive linear notable correlation with organizational resilience based on the P-value less than 0.05 ( $P\text{-value} = 0.000 < 0.05$ ) which implies that both variables have direct positive relationship which moves in the same positive direction. Similarly, the positive correlation is attuned with the findings of previous studies like Osita-Ejikeme, and Amah, (2022) where the study suggests, among other things, that CEOs in manufacturing firms intentionally position their organizations to identify and gather outside knowledge about their industry, technology, and market trends early. Onyokoko, and Onuoha, (2021) study found that there is a strong and positive correlation between human resource flexibility and adaptive capabilities as well as between structural flexibility and both. Lawrence-Chuku, and Onuoha, (2022) studied organizational flexibility and corporate performance of food and beverage firms in Rivers State, Nigeria. Thus, it was determined that increasing organizational flexibility will contribute to the improvement of food and beverage companies' corporate performance in Rivers State. From their findings, operational flexibility has a positive impact on organizational resilience.

**Conclusion and Recommendations**

Remaining resilience in the business domain amongst the fierce nature of rivalry is a critical goal of all organization. Resilience of organization enable them to stay relevant and more agile even after encountering several challenges. The failure of most organization has over the years be attributed to poor resilience ability of firms. Organization that ensure operational flexibility are most likely to stay resilient in the competitive world. This is so because organizations need to constantly alter their operational activities in order to meet up with the present realities. New product flexibility and volume flexibility are essential factors in improving the resilience capacity of SMEs in Rivers state. Small and medium scale enterprise are operating in a very tough business domain and their ability to maintain constant flexibility in their operation will help enhance their resilience. In conclusion, operational flexibility in the areas of new product flexibility and volume flexibility is necessary in boosting organizational

resilience of SMEs in Rivers State, Nigeria. In light of the study's results and conclusions, the following recommendations are offered:

- i. It is imperative for entrepreneurs who run small and medium-sized enterprises (SMEs) to make sure that their product and services employ flexible methodologies for both new product creation and modification in order to meet project goals and be able to adjust to changing market conditions.
- ii. The owners of SMEs should ensure flexibility in product manufacturing as such will enable them meet with the varying market demand and then enhance the firms resilience.
- iii. Owners of SMEs or entrepreneurs should make sure that the organization's goods and services are constantly accessible; follow the ethical guide or the ordinances that govern their industry.
- iv. The owners of the SMEs should also be watchful in their volume production as such will help eliminate waste and increase the resilience of the organization.

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